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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,535	03/29/2004	Julie Miller	070602-0364	3429

31824 7590 06/07/2005

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EXAMINER

NGUYEN, HOANG V

ART UNIT	PAPER NUMBER
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2821

DATE MAILED: 06/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary

Application No.

10/812,535

Applicant(s)

MILLER ET AL.

Examiner

Hoang V. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-17 and 37-42 is/are allowed.
- 6) ☒ Claim(s) 18-20, 30 and 31 is/are rejected.
- 7) ☒ Claim(s) 21-29 and 32-36 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/28/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 18-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Hay et al (US 2004/0108961 A1).

Regarding claim 18, Hay (Figure 2A) discloses a satellite comprising an illuminating reflector 200 configured to transmit a first portion of a frequency band 230 in a collimated beam and a second portion 232 of a frequency in a dispersed beam.

Regarding claim 19, as applied to claim 18, Hay teaches that the dispersed beam is a low-gain beam.

Regarding claim 20, as applied to claim 18, Hay teaches that the collimated beam is a high-gain beam.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hay.

Hay discloses a satellite comprising an illuminating reflector configured to transmit a first portion of a frequency band in a collimated beam and a second portion of a frequency in a dispersed beam. Hay fails to specifically teach that the primary reflector having a diameter greater than or equal to about six feet and less than or equal to about eight feet or that the secondary reflector having a diameter greater than or equal to about eight inches. Hay (Figure 6), however, teaches the step of optimizing the size of the reflectors in order to satisfy desired application requirements.

Allowable Subject Matter

5. Claims 21-29 and 32-36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Claims 1-17 and 37-42 are allowed.

7. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims 1 and 21, Hay discloses an illuminating-reflector system comprising primary and secondary reflectors. Hay, however, fails to specifically teach that the secondary reflector configured to transmit a first portion of the frequency band to form a dispersed beam and to reflect a second portion of the frequency band; and the primary reflector configured to receive the second portion of the frequency band reflected from the secondary reflector and to reflect the second portion of the frequency band to form the substantially collimated beam.

Claims 2-17 are allowed for depending on claim 1.

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Regarding claim 22, Hay fails to further teach, among other features, that the dispersed beam is configured to be acquired by another satellite for initial acquisition and automatic tracking of the first-mentioned satellite.

Regarding claim 23, Hay fails to further teach, among other features, a dispersive lens configured to receive the frequency band from a beam waveguide and transmit the frequency band to the secondary reflector.

Claims 24-27 would have been found allowable for depending on claim 23.

Regarding claims 28 and 29, Hay fails to specifically teach, among other features, that the frequency band includes a W-band.

Regarding claims 32 and 33, Hay fails to specifically teach, among other features, that the gain of the primary reflector is about 59.5 dBi.

Regarding claim 34, Hay fails to specifically teach, among other features, that the gain of the secondary reflector is less than or equal to about -33 dBi below the primary beam.

Regarding claims 35 and 36, Hay fails to further teach, among other features, a satellite bus operatively coupled to the illuminating reflector.

Regarding claim 37, none of the prior art of record, either taken singly or in combination, fairly teaches the method comprising the steps of transmitting in a dispersed beam a first portion of a frequency band through a secondary reflector, wherein the secondary reflector is configured to form a portion of an illuminating reflector; reflecting a second portion of the frequency band from the secondary reflector; receiving at a primary reflector the second portion of the frequency band reflected from the secondary reflector, wherein the primary reflector is configured to form

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another portion of the illuminating reflector; and reflecting at the primary reflector the second portion of the frequency band a substantially collimated beam.

Claims 38-42 are allowed for depending on claim 37.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Patents 6,252,559 B1 and 5,373,302 disclose a multi-band dual reflector antenna system.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoang V. Nguyen whose telephone number is (571) 272-1825. The examiner can normally be reached on Mondays-Fridays from 9:00 a.m. to 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoang Nguyen can be reached on (571) 272-1825. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hvn
6/6/05



**HOANG V. NGUYEN
PRIMARY EXAMINER**